



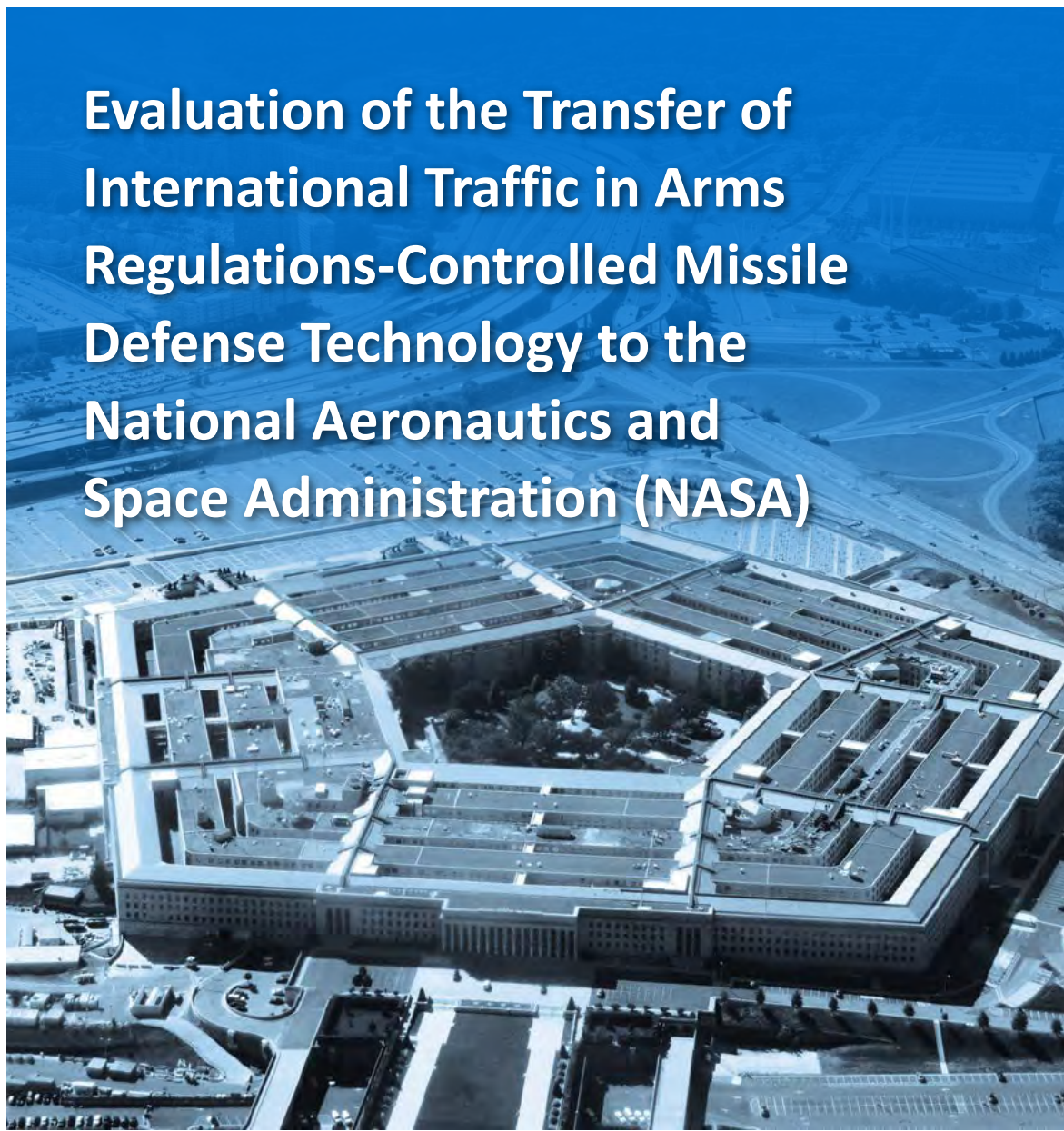
# INSPECTOR GENERAL

*U.S. Department of Defense*

JULY 13, 2015



## Evaluation of the Transfer of International Traffic in Arms Regulations-Controlled Missile Defense Technology to the National Aeronautics and Space Administration (NASA)



INTEGRITY ★ EFFICIENCY ★ ACCOUNTABILITY ★ EXCELLENCE

INTEGRITY ★ EFFICIENCY ★ ACCOUNTABILITY ★ EXCELLENCE

## Mission

*Our mission is to provide independent, relevant, and timely oversight of the Department of Defense that supports the warfighter; promotes accountability, integrity, and efficiency; advises the Secretary of Defense and Congress; and informs the public.*

## Vision

*Our vision is to be a model oversight organization in the Federal Government by leading change, speaking truth, and promoting excellence—a diverse organization, working together as one professional team, recognized as leaders in our field.*



For more information about whistleblower protection, please see the inside back cover.



# Results in Brief

## *Evaluation of the Transfer of International Traffic in Arms Regulations-Controlled Missile Defense Technology to the National Aeronautics and Space Administration (NASA)*

July 13, 2015

### Objective

In response to House Report 113-446, "Howard P. 'Buck' McKeon National Defense Authorization Act for Fiscal Year 2015," we conducted an evaluation of the transfer of specific International Traffic in Arms Regulations (ITAR)-controlled missile defense technology from the Missile Defense Agency (MDA) to the National Aeronautics and Space Administration (NASA). Specifically, Congress asked us to determine the following.

- A. Did MDA and NASA officials comply with Federal and DoD transfer policies and procedures for protecting classified and ITAR-controlled technology?
- B. Was the transferred technology classified?
- C. Who had access to the technology, including foreign nationals?
- D. Was the technology retransferred beyond U.S. Government control and if so, was there any damage to U.S. security resulting from the transfer?

### Findings

- A. MDA and NASA officials complied with Federal and DoD policies and procedures for transfer of the ITAR-controlled missile defense technology between Federal agencies.
- B. The transferred ITAR-controlled missile defense technology was not classified.
- C. Subsequent to the completion of the transfer in January 2008, NASA officials allowed two foreign national contractors unauthorized access to ITAR-controlled missile technology in violation of the ITAR.
- D. There was insufficient evidence to determine whether DoD ITAR-controlled missile defense technology was retransferred beyond the control of the U.S. Government.



**INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
4800 MARK CENTER DRIVE  
ALEXANDRIA, VIRGINIA 22350-1500**

July 13, 2015

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF STATE  
ADMINISTRATOR, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
INSPECTOR GENERAL, NATIONAL AERONAUTICS AND  
SPACE ADMINISTRATION  
DIRECTOR, MISSILE DEFENSE AGENCY

SUBJECT: Evaluation of the Transfer of International Traffic in Arms Regulations-Controlled  
Missile Defense Technology to the National Aeronautics and Space Administration (NASA)  
(Report No. DODIG-2015-146)

In response to House Report 113-446, "Howard P. 'Buck' McKeon National Defense Authorization Act for Fiscal Year 2015," we evaluated the transfer of specific International Traffic in Arms Regulations (ITAR)-controlled missile defense technology from the Missile Defense Agency (MDA) to the National Aeronautics and Space Administration (NASA). Our overall objective was to determine whether Federal and DoD policies and procedures were followed regarding the transfer of, and access to, the ITAR-controlled missile defense technology. We conducted this evaluation in accordance with the Council of Inspectors General on Integrity and Efficiency (CIGIE), "Quality Standards for Inspection and Evaluation."

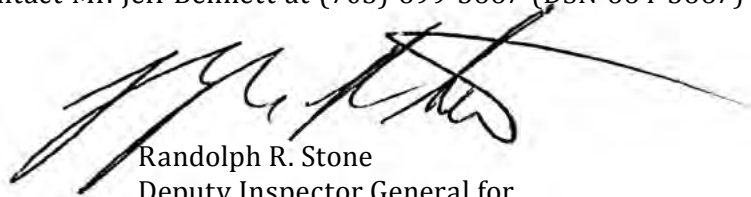
We determined that:

- A. MDA and NASA officials complied with Federal and DoD policies and procedures for transfer of the ITAR-controlled missile defense technology between Federal agencies;
- B. The transferred ITAR-controlled missile defense technology was not classified;
- C. Subsequent to the completion of the transfer in January 2008, NASA officials allowed two foreign national contractors unauthorized access to ITAR-controlled missile technology, which was in violation of the ITAR; and
- D. There was insufficient evidence to determine whether DoD ITAR-controlled missile defense technology was retransferred beyond the control of the U.S. Government.

We are forwarding this report to NASA, NASA OIG, and the Department of State OIG, and the Department of State, Directorate of Defense Trade Controls (DDTC), for their information and action as they deem appropriate.



We appreciate the courtesies extended to the evaluation staff during the project. For more information on this report, please contact Mr. Jeff Bennett at (703) 699-5667 (DSN 664-5667) or [jeff.bennett@dodig.mil](mailto:jeff.bennett@dodig.mil).



Randolph R. Stone  
Deputy Inspector General for  
Policy and Oversight

cc: DIRECTOR, DIRECTORATE OF DEFENSE TRADE CONTROLS

# Contents

---

## Introduction

Objective	1
Background	1
Transfer of DACS	3

## Findings

Finding A. The Transfer of the ITAR-controlled Missile Defense Technology Was Conducted in Compliance with Federal and DoD Policies and Procedures for the Transfer of Equipment Between Federal Agencies	3
Conclusion	5
Finding B. The Transferred ITAR-Controlled Missile Defense Technology Was Not Classified	6
Classification of DACS	6
Conclusion	7
Finding C. Subsequent to the Completion of the Transfer in January 2008, NASA Officials Allowed Two Foreign National Contractors Unauthorized Access to ITAR-Controlled Missile Defense Technology in Violation of the ITAR	8
Access to DACS	8
Conclusion	13
Finding D. There Was Insufficient Evidence to Determine Whether DoD ITAR-Controlled Missile Defense Technology Was Retransferred Beyond the Control of the U.S. Government	14
Evidence of Retransfer of DACS	14
Conclusion	15

## Appendix

Scope and Methodology	16
Use of Computer-Processed Data	16
Prior Coverage	16

## Acronyms and Abbreviations

# Introduction

---

## Objective

In response to House Report 113-446, “Howard P. ‘Buck’ McKeon National Defense Authorization Act for Fiscal Year 2015,” we conducted an evaluation of the transfer of specific International Traffic in Arms Regulations (ITAR)-controlled missile defense technology from the Missile Defense Agency (MDA) to the National Aeronautics and Space Administration (NASA). Specifically, Congress asked us to determine whether the transfer was conducted in compliance with Federal and DoD transfer policies and procedures for protection of classified and ITAR-controlled technology; whether the transferred technology was classified; who had access to the technology, including foreign nationals; and whether the technology was retransferred beyond U.S. Government control; and if so, was there any damage to U.S. security resulting in the transfer.

## Background

This evaluation focused on the transfer of a Divert Attitude and Control Subassembly (DACS) from MDA to NASA from October 2007 through January 2008 and whether the transfer comported with the requirements of the Arms Export Control Act (22 United States Code [U.S.C.] § 2778) (AECA), specifically, the ITAR. The DACS is the ITAR-controlled missile defense technology mentioned throughout this report. Pursuant to section 38 of the AECA, the President is authorized to control export and import of defense articles and defense services. Items designated as “defense articles and services” are listed on the United States Munitions List. Any person or organization wanting to export a designated item or related technical data must first obtain an export license from the Department of State, Directorate of Defense Trade Controls (DDTC<sup>1</sup>). To further explain an export, 22 Code of Federal Regulations (CFR) § 120.17 (a)(4) states that a defense article can be exported by disclosing data, either orally or visually, or transferring technical data to a foreign person, whether in the United States or abroad.

---

<sup>1</sup> DDTC is charged with controlling the export and temporary import of defense articles and defense services on the United States Munitions List (USML).

In House Report 113-102, which accompanied the National Defense Authorization Act for Fiscal Year 2014, the Committee on Armed Services, House of Representatives, directed:

(T)he Secretary of Defense, in consultation with the Federal Bureau of Investigation and the National Aeronautics and Space Administration (NASA), to provide a briefing to the congressional defense committees, the Science, Space and Technology Committee of the House, and the Commerce, Science and Transportation Committee of the Senate, not later than August 1, 2013, to respond to certain questions concerning reports of the illegal transfer of Missile Defense Agency (MDA) developed technology.

Subsequently, House Report 113-446 states that the Committee on Armed Services:

were troubled the stated agencies (*supra*) were unable to respond to their previous questions. Therefore, the Committee asked the Inspector General of the Department of Defense to investigate the transfer of ITAR controlled missile defense technology from MDA to NASA. The Committee further asked the IG [Inspector General] to provide a preliminary report, or brief the initial findings, to the House Committee on Armed Services and the Committee on Science, Space, and Technology of the House of Representatives by November 30, 2014.

This report documents the results of our evaluation and expands on the preliminary information briefed to Committee staff on February 4, 2015.



## Finding A

### **The Transfer of the ITAR-controlled Missile Defense Technology Was Conducted in Compliance with Federal and DoD Policies and Procedures for the Transfer of Equipment Between Federal Agencies**

#### **Transfer of DACS**

The Program Director of MDA's Multiple Kill Vehicle (MKV) Program Office, and the Director of Programs, NASA Ames Research Center (ARC), California, were colleagues throughout the 1980s and 1990s while working for the U.S. Air Force. In 2001, the MDA MKV Program Director began work at MDA. In 2006, the NASA ARC Director of Programs began work at NASA ARC. One of the projects the NASA ARC Director of Programs was tasked to develop was a small lunar lander. He was interested in using existing DoD propulsion technology to design the most cost-efficient, small-scale spacecraft possible. In October 2007, he contacted the MDA MKV Program Director and requested MDA transfer an excess DACS, which had potential value to NASA's small lunar lander venture.

At the time of the request, the DACS was a component under the cognizance of the MDA Kinetic Energy Interceptor (KEI) Program Director. Because the MDA MKV Program Director did not have the authority to approve the transfer, he referred the NASA ARC Director of Programs to the MDA KEI Program Director. The KEI Program Director coordinated the request with the KEI chief engineer. The KEI chief engineer, who was also the contracting officer representative, agreed to transfer the DACS to NASA. According to the MDA contracting officer, the authority to transfer Government-owned equipment to another Federal agency is allowed by the guidance set forth in DoD 4161.2-M, "DoD Manual for the Performance of Contract Property Administration." The Manual states "the first source of acquiring material should be an internal review of available in-house DoD assets, which are excess to other requirements."

In November 2007, the MDA MKV Program Director notified the NASA ARC Director of Programs the DACS transfer from MDA to NASA ARC was approved. In accordance with the Federal Acquisition Regulation (FAR), Section 45.106, Government property clauses, the MDA contracting officer completed an SF 30, "Amendment of Solicitation/Modification of Contract." The SF 30 was both the

contract documentation memorializing the transfer and the contract direction to execute the transfer. The SF 30 contract modification directed Northrop Grumman Space & Mission Systems, the prime contractor, to transfer the DACS and related hardware components to NASA ARC.

In turn, the Northrop Grumman subcontracts manager directed the Raytheon Company, Northrop Grumman's subcontractor, to effect the DACS transfer. The Raytheon Company was providing bonded storage services for the DACS at the time. The Northrop Grumman subcontracts manager also directed the Raytheon Company to remove the two classified components from the DACS before the transfer. As directed, Raytheon Company personnel removed the classified components and shipped the DACS to NASA ARC by completing DD Form 1149, "Requisition and Shipping Document."

In January 2008, the Raytheon Company completed a Straight Bill of Lading to document the transfer of the DACS from Raytheon Company to NASA ARC. The NASA ARC contracting section personnel confirmed with an MDA contract specialist they "picked-up" the DACS. NASA ARC personnel subsequently stored the DACS in a secured, access-controlled area.

The DACS was not classified; therefore, no Federal, DoD, or agency transfer policies for classified equipment were applicable. ITAR export control procedures were also not applicable because the transfer from MDA to NASA, two U.S. government agencies both within the United States proper, did not require a license. That said, a DDTC compliance subject matter expert told us although the DACS is an ITAR-controlled defense article, the regulations do not require a license or other export authorization unless an export (see ITAR 120.17) or reexport or retransfer (see ITAR 120.19) occurs. He said even where an export does occur, in many cases transfers between U.S. Government agencies are exempted under ITAR 126.4 from the ITAR 123.1 license requirement. Despite these limitations, he said the provider of ITAR-controlled defense articles or services is responsible for ensuring an unauthorized export does not occur. This requires the provider to ensure that any transfer of controlled defense articles or services is not an export under the ITAR and, to the extent it is, that any exemptions to license requirements are properly applied. Importantly, the DDTC compliance subject matter expert said this responsibility includes ensuring that the actual shipment of controlled equipment is handled in an ITAR-compliant manner (for instance, unauthorized export may occur if the shipment is handled by a foreign person). He said in order to ensure that an unauthorized export did not occur, MDA should have notified NASA that the DACS was ITAR-controlled technology and verified that the transfer was handled in an ITAR-compliant manner.

Further, MDA did not have any agency policies in place at the time of the transfer that would have required MDA to notify NASA that the DACS was subject to ITAR. Additionally, DoDD 2040.2, International Transfers of Technology, Goods, Services, and Munitions, January 17, 1984, which was the prevailing DoD guidance in place at the time of the transfer, did not require exporting agencies to notify the gaining agency the technology was ITAR controlled technology requiring special handling.

It should be noted DoDI 2040.02, International Transfers of Technology, Articles, and Services, March 27, 2014, now requires the identification and marking of unclassified and classified export controlled information and technology to restrict access and use by unauthorized foreign nationals.

## Conclusion

The transfer of the DACS to NASA was accomplished in accordance with the applicable Federal and DoD policies and procedures in effect at the time of the transfer of equipment between Federal agencies.

## Finding B

### The Transferred ITAR-Controlled Missile Defense Technology Was Not Classified

#### Classification of DACS

The DACS and associated components transferred to NASA ARC were not classified, as evidenced by the documentation provided by MDA. Before the transfer, Raytheon Company (Northrop Grumman's subcontractor) officials removed the DACS classified subcomponents, identified as the seeker assembly and communication hardware. The removal was directed by MDA officials through Northrop Grumman.

The removal was accomplished through the issuance of an SF 30 dated November 26, 2007, on contract HQ0006-04-C-0004. The contract modification issued to Northrop Grumman stated "[p]rior to the equipment transfer, the contractor is to remove the seeker assembly and communication hardware (including the encrypter, telemetry subsystem and processor system)."

On January 7, 2008, the MDA contract specialist informed MDA senior officials involved in the DACS transfer approval action that MDA received the signed DD Form 1149 from the NASA contracting section. The MDA contracting specialist reported that NASA officially "picked-up" the equipment (the DACS) that was transferred to NASA. The MDA contract specialist deemed the action and transfer closed. A review of a copy of the DD Form 1149, dated December 28, 2007, disclosed that the equipment MDA transferred to NASA was "Divert and Attitude Control Subassembly, part number 1231245-9, serial number 0000001; Ordnance/Valve Driver, part number 2256514-1; and Power Conditioning Unit, part number 2256511-1."

The classified seeker assembly and communications hardware were stored and remained in the classified Raytheon lab. On August 22, 2008, the lab manager accounted for the classified seeker assembly and communication hardware by completing an SF 153, "COMSEC [Communication Security] Material Report."

Based on documents the Raytheon Company provided to us, the classified seeker assembly and communication hardware appears to have remained in the classified Raytheon lab until it was destroyed in 2011. On December 13, 2011, the Raytheon Company completed an SF 153 documenting the destruction of the classified seeker assembly and communication hardware.

## Conclusion

The DACS that was transferred from MDA to NASA was not classified; therefore, transfer regulations pertaining to the protection of classified information and technology did not apply.

## Finding C

### **Subsequent to the Completion of the Transfer in January 2008, NASA Officials Allowed Two Foreign National Contractors Unauthorized Access to ITAR-Controlled Missile Defense Technology in Violation of the ITAR**

#### **Access to DACS**

ITAR regulations dictate that information and material pertaining to defense and military-related technologies, which are items listed on the U.S. Munitions List, may only be shared with U.S. Persons absent an export license or other export authorization. A U.S. Person is defined by 22 CFR § 120.15 as a “person who is a lawful permanent resident as defined by 8 U.S.C. 1101(a)(20) or who is a protected individual as defined by 8 U.S.C. 1324b(a)(3).” In accordance with 22 CFR § 120.17(a)(4), disclosing data, either orally or visually, or transferring technical data to a foreign person is considered an export. In order to disclose or export a defense article or technical data to a foreign person, a license must be issued by DDTC permitting the disclosure or export or the exporter must have some other form of export authorization.

Several NASA ARC Small Spacecraft Project Office (SSPO) employees, all of whom were U.S. citizens, had access to the DACS after its arrival in January 2008 until September 2012 when it was moved to the warehouse. From January 2008 through October 2008, NASA ARC officials allowed a British national contractor visual access to 200 photographs of the DACS and physical access to the DACS before he was issued a DDTC export license that would have authorized such access. We also noted that in December 2007, NASA ARC officials allowed the British national contractor visual access to an ITAR-marked, DACS schematic PowerPoint slide. In addition, NASA ARC officials allowed a German national contractor, who was issued an export license that did not include the DACS, access to the DACS on at least one occasion in March 2009. Based on their respective citizenship standings at the time of the alleged access to ITAR technology, neither of the foreign nationals had protected or U.S. Persons status as noted in 22 CFR § 120.15, 8 U.S.C. 1101(a)(20) or 8 U.S.C. 1324b(a)(3). As mandated by 22 U.S.C 2778 and 22 CFR § 127.1 (a)(1), the British and German nationals’ access was considered export violations as neither were authorized to access the DACS.



### ***NASA Employees' Access to ITAR Technology***

The DACS arrived at NASA ARC Flight Processing Center in January 2008. It was initially stored in the High Bay Clean Room and later moved to Laboratory 118. Both locations were access-controlled spaces requiring a passcode for entry. The DACS was later moved into the bonded stores warehouse. This area also had limited access with five personnel having keys to the facility. The DACS was stored in the original shipping container, and direct access to the DACS required coordination with facilities personnel to remove the steel lid to the container. NASA officials told us the DACS was not exposed visually unless the steel lid was removed and NASA personnel were inspecting the DACS.

Although we determined NASA employees and contractors had access to these spaces, there is no indication the DACS was visually or physically exposed to a large number of NASA ARC personnel. The NASA ARC personnel with access to the DACS were typically SSPO team members and senior NASA officials. However, as noted above, in addition to U.S. personnel, one British national contractor and one German national contractor had visual and physical access to the DACS.

As previously stated, the DACS was delivered to NASA ARC on January 8, 2008. We reviewed the High Bay Clean Room access logs for this specific date. There were no corresponding entries to indicate the DACS was brought into the High Bay Clean Room.

The access logs from January 2008 to June 2008 do not appear to accurately reflect which NASA personnel had access to this space.<sup>2</sup> This is a critical time period as the DACS arrived in January 2008, and the British national contractor told us he had access to the DACS at some point in time within 6 months of it arriving at NASA ARC. However, neither the arrival of the DACS nor the British national's access to the DACS was reflected in these logs during this timeframe.

### ***British National's Access to ITAR Technology***

On December 15, 2007, the NASA ARC Director of Programs e-mailed several NASA colleagues, including the British national contractor, a file that included a schematic of a DACS. The file was titled, "Near Field Infrared Experiment (NFIRE)/Kill Vehicle (KV) Hover Test System Design Review/25 March 2003."

---

<sup>2</sup> The analysis of the logs revealed inconsistencies including one custodian accounting for 98 percent of the logged entries for a 6-month period and the same custodian having multiple sign-in entries for the same day and different time frames that overlapped.

The first page of the attachment was titled, “NFIRE Kill Vehicle (KV) Hover Test System Design Review,” and was dated March 25, 2003. The lower left corner of this page included an ITAR marking.<sup>3</sup> The second page, titled, “System Engineering IPT, DACS Schematic,” had no markings. The DDTC later determined the System Engineering IPT, DACS Schematic on page 2 was covered by Category IV(i)<sup>4</sup> on the United States Munitions List. The British national was not authorized to receive export-controlled technical information because an appropriate export license had not been issued at the time. The British national told us he did not recall receiving or reviewing the schematic.

In January 2008, the British national also had access to approximately 200 photographs of the DACS. Shortly after the DACS arrived at NASA ARC on January 8, 2008, NASA employees removed the shipping container lid and viewed the DACS. A NASA engineer took approximately 200 photographs of the DACS from various distances. On January 9, 2008, the NASA engineer e-mailed his NASA colleagues a link to the photographs he took during the unveiling of the DACS. The British national was one of the approximately 16 e-mail recipients. The British national told us he did not recall this e-mail or viewing the photographs.

We requested NASA officials determine whether the British national accessed the e-mail and photographs. NASA IG officials told us the NASA ARC IT system network administrator was unable to obtain historical access information. Additionally, NASA IG officials told us the British national’s laptop computer hard drive was corrupted so they were unable to query or search for historical account access records on his computer. Therefore, there was no way for us to determine if the British national accessed the e-mail and photographs. The British national was not authorized to receive ITAR-controlled technical data because he had not yet been issued an appropriate export license.

The NASA export administrator reviewed the photographs and stated, in his opinion, the photographs did not contain information that met the definition of “technical data” contained in 22 CFR § 120.10.

We also asked a DDTC compliance subject matter expert to determine if the DACS components depicted in the 200 photographs met the definition of “technical data.” He stated that he could not render an opinion, as formal determinations regarding whether items or services are U.S. Munitions List items are handled through the Commodity Jurisdiction process (under ITAR 120.4). However, he

---

<sup>3</sup> The marking states, “This document contains data within the definition of the International Traffic in Arms Regulations, and are subject to the export control laws of the U.S. Government. Transfer of this data by any means to a foreign person, whether in the U.S. or abroad, without an export license or other approval from the U.S. Department of State, is prohibited.”

<sup>4</sup> Category IV (i) is launch vehicles, guided missiles, ballistic missiles, rockets, torpedoes, bombs, and end mines.

noted that the facts suggested that relevant controlled technical data had already been exported to the British national when he was provided the ITAR-marked schematic. In addition, regardless of whether any of the photographs actually depict “technical data,” an export violation occurred when the British national had unauthorized access to the defense article (the DACS).

The British national told us he had visual and physical access to the DACS on two separate occasions while it was in the High Bay Clean Room. His first access to the DACS occurred sometime within 6 months of its arrival in January 2008. However, the British national was not authorized to access or view the DACS because he was not yet issued an export license.

The second access occurred in February 2009 when he and senior NASA ARC officials inspected the DACS. During the inspection, he was photographed with the NASA ARC Director and other senior NASA ARC officials. Ultimately, he saved 46 photographs from the inspection on his NASA-issued laptop. At the time of the inspection, the British national had been issued an export license by the DDTC to access unclassified technical data related to the Lunar Atmosphere and Dust Environment Explorer (LADEE) and other mission designs. The NASA export administrator opined the license would have included the DACS, provided it was related to LADEE and other designs at the Mission Design Center. However, the NASA ARC Director of Programs and, separately, the former NASA ARC chief engineer for LADEE both told us this export license did not include the DACS because it was unrelated to LADEE. We provided the information pertaining to the British national's export license to the DDTC compliance subject matter expert and he declined to render an opinion as to whether the license issued in October 2008 included the DACS. DDTC cited that the violation occurred 7 years ago and that the unclassified technical data were already exported to the British national when he was provided the ITAR-marked schematic.

Further, the High Bay Clean Room access logs list three entries for the British national. The first access log entry was when the British national and a NASA propulsion engineer signed into the High Bay Clean Room on January 27, 2009. The British national told us he did not recall the purpose for entry into that room. There is no corresponding entry on the access logs for the British national's access to the DACS any other time between January and June 2008. The other two entries correspond to visits on February 13, 2009, and February 26, 2009. It should be noted that entry into the High Bay Clean Room does not necessarily constitute access to the DACS as there were other NASA projects in the High Bay Clean Room at this time, and the DACS was sealed in its shipping container.

### ***German National's Access to ITAR Technology***

NASA ARC personnel and contractor employees of Stellar Exploration, Inc. (SEI), a private U.S. company, had visual and physical access to the DACS. This occurred after NASA ARC awarded a Small Business and Innovative Research (SBIR) contract to test the DACS divert thruster valves. Two SEI employees recalled that a German national contractor assigned to the LADEE project had visual and physical access to the DACS on March 23, 2009. This occurred when SEI employees and a NASA propulsion engineer removed the divert thruster for testing by SEI.

The German national told us he did not recall being present for the removal of the divert thruster. The access logs for March 23, 2009, indicate the German national was signed into the High Bay Clean Room on the date we determined the thruster was removed. The German national also stated he was only present when a senior NASA engineer took measurements to determine how to remove the thruster. Two SEI employees informed us they believed the German national was present for the removal. Based on the two SEI employees' testimony, as well as the access logs, we concluded the German national was present when the divert thruster was removed. According to DDTC, this access to the DACS by the German national contractor was an export violation as he was not issued an export license at the time this access occurred.

Additionally, we discovered that in September 2010, the German national had access to the divert thruster removed by SEI after it was returned to a senior NASA ARC engineer. The divert thruster was stored in an unlocked, hard-side "Pelican case" for the next 4 years in an office the German national shared with the engineer. The German national told us that during a weekend in September 2014, he went to their shared office and discovered the Pelican case, which he believed to contain the divert thruster, was outside his office along with his possessions due to office re-location. He collected his possessions and the Pelican case and took them to his private residence. The German national, who by then was a permanent resident alien, told us he forgot to inform the senior NASA engineer he had the Pelican case.

In November 2014, the senior NASA engineer noticed the Pelican case was missing and asked about the case and the divert thruster. The German national retrieved the case from his home and returned the case and thruster to the engineer's office. The German national did not inform the engineer, or anyone else, that he stored the case at his residence. The German national told us he did not open the case while it was in his possession.

After our February 2015 interview with the German national, the German national reported this incident to the NASA ARC export administrator. The NASA ARC export administrator informed him that because he became a permanent resident alien of the United States in December 2010, no export violation occurred because he is considered a U.S. Person; therefore, an export would not apply.

## Conclusion

Any access to the DACS or other ITAR-restricted technology by any foreign national without a license issued by the DDTC or some other form of export authorization constitutes an export violation.

Several NASA employees and contractors, including a British national contractor and a German national contractor, had visual and physical access to the DACS. The licenses issued to export technical data to these foreign nationals did not include the DACS. An export license was not issued to the British national until October 2008, after he had access to the DACS or ITAR-controlled information on at least three occasions. The license issued to the British national authorized the release of technical information related to LADEE and other mission designs at the NASA ARC Mission Design Center. The license did not specifically identify the DACS.

The NASA export administrator opined that this license for the British national would have covered the release of technical data, provided it was related to LADEE and other mission designs at the Mission Design Center. However, the NASA ARC Director of Programs and the former NASA ARC chief engineer for LADEE both told us the DACS was not incorporated into LADEE, and the export license would not have included the DACS.

The NASA export administrator also reviewed four export licenses associated with the German national contractor and stated that the German national contractor was not authorized to receive technical data related to the DACS. The NASA export administrator also opined there was not an unauthorized release of technical data to the German national when he accessed the DACS and the divert thruster because there was no indication the German national examined the divert thruster or collected information that met the ITAR definition of technical data.

As a result of possible export violations, we presented our findings to the United States Attorney's Office (USAO) for the District of Columbia, National Security Division, in April 2015. The USAO declined prosecutorial interest due to potential violations occurring outside the 5-year statute of limitations as well as insufficient evidence of a willful violation of U.S. export laws.

## Finding D

---

### **There Was Insufficient Evidence to Determine Whether DoD ITAR-Controlled Missile Defense Technology Was Retransferred Beyond the Control of the U.S. Government**

#### **Evidence of Retransfer of DACS**

Retransfer is defined by 22 CFR § 120.19 as the “transfer of defense articles or defense services to an end use, end user or destination not previously authorized.” According to a DDTC compliance subject matter expert, an export violation would have occurred when a foreign national, without authorization or an export license, was exposed to the DACS. A retransfer would have occurred if the foreign national, in this case the British or German foreign national, shared or provided any export-controlled technical information to another foreign national or entity who was not authorized to receive the information.

As stated in Finding C, we became aware that the British national contractor had access to a schematic of the DACS and approximately 200 photographs of the DACS. We were informed that the British national travelled to Vienna, Austria, in June 2009 to attend the Space Generation Advisory Council’s United Nations Conference on Peaceful Uses for Outer Space. The British national took with him his NASA-issued laptop. Forty-six photographs taken during the February 2009 inspection were saved on the laptop hard drive. After the conference ended, the British national visited his family in the United Kingdom, and then travelled back to the United States. He had the NASA laptop computer with him during his visit with his family. When asked if he shared any technical data with anybody, he stated he had not. Due to the lack of computer forensic evidence, we were not able to prove or disprove his contention that he did not share the technical data with anybody.

Also, as stated in Finding C, the divert thruster was stored in an unlocked Pelican case from September 2010 until September 2014 in an office shared by the German national contractor and a senior NASA ARC engineer. In September 2014, the German national, who by that time had become a permanent resident alien, took the divert thruster to his residence after finding it left unattended outside his



office. He stated he kept the divert thruster at his residence until November 2014. The German national told us he did not open the Pelican case while it was stored in his shared office or when he took it to his home where it remained for up to 3 months. We had no way to determine what he did with the thruster while it was in his possession at his home.

## Conclusion

Based on the evidence and testimony, we were not able to determine whether a retransfer occurred. Our evaluation was limited based on NASA's inability to provide historical email records and the lack of computer forensic data for review.

## Appendix

---

### Scope and Methodology

We conducted this evaluation from July 2014 to May 2015, in accordance with the Council of Inspectors General on Integrity and Efficiency, “Quality Standards for Inspections and Evaluations,” January 2012. Based on the assessment objectives, we planned and performed this evaluation to obtain sufficient information to provide a reasonable basis for our observations and conclusions.

Our independent evaluation included a review of investigative reports and documents from the Federal Bureau of Investigation, Department of Homeland Security, and the NASA Office of Inspector General. We also reviewed the policies and procedures in effect at the time this technology was transferred from the MDA and U.S. defense contractors to NASA.

We analyzed MDA’s compliance with agency, DoD, and ITAR procedures and requirements for transferring this technology to NASA. We collected and analyzed the data call response from MDA and NASA. As a result of the review and analysis of the data call information, we conducted multiple field interviews of current and former U.S. Government employees and contractors who were either knowledgeable or participated in the transfer of this technology. Additionally, we reviewed the process by which NASA ARC employees and contractors were given access to the ITAR-controlled missile defense technology.

### Use of Computer-Processed Data

We did not use computer-processed data to perform this evaluation.

### Prior Coverage

No prior DoD OIG coverage has been conducted on the transfer of the DACS from MDA to NASA.

## Acronyms and Abbreviations

---

<b>AECA</b>	Arms Export Control Act
<b>ARC</b>	Ames Research Center
<b>CFR</b>	Code of Federal Regulations
<b>COMSEC</b>	Communication Security
<b>DACS</b>	Divert Attitude and Control Subassembly
<b>DDTC</b>	Directorate of Defense Trade Controls
<b>FAR</b>	Federal Acquisition Regulations
<b>ITAR</b>	International Traffic in Arms Regulations
<b>KEI</b>	Kinetic Energy Interceptor
<b>KV</b>	Kill Vehicle
<b>LADEE</b>	Lunar Atmosphere and Dust Environment Explorer
<b>MDA</b>	Missile Defense Agency
<b>MKV</b>	Multiple Kill Vehicle
<b>NASA</b>	National Aeronautics and Space Administration
<b>NFIRE</b>	Near Field Infrared Experiment
<b>SBIR</b>	Small Business Innovative Research
<b>SEI</b>	Stellar Exploration, Inc.
<b>SSPO</b>	Small Spacecraft Project Office
<b>USAO</b>	United States Attorney's Office



# **Whistleblower Protection**

## **U.S. DEPARTMENT OF DEFENSE**

*The Whistleblower Protection Enhancement Act of 2012 requires the Inspector General to designate a Whistleblower Protection Ombudsman to educate agency employees about prohibitions on retaliation, and rights and remedies against retaliation for protected disclosures. The designated ombudsman is the DoD Hotline Director. For more information on your rights and remedies against retaliation, visit [www.dodig.mil/programs/whistleblower](http://www.dodig.mil/programs/whistleblower).*

## **For more information about DoD IG reports or activities, please contact us:**

### **Congressional Liaison**

[congressional@dodig.mil](mailto:congressional@dodig.mil); 703.604.8324

### **Media Contact**

[public.affairs@dodig.mil](mailto:public.affairs@dodig.mil); 703.604.8324

### **Monthly Update**

[dodigconnect-request@listserve.com](mailto:dodigconnect-request@listserve.com)

### **Reports Mailing List**

[dodig\\_report@listserve.com](mailto:dodig_report@listserve.com)

### **Twitter**

[twitter.com/DoD\\_IG](https://twitter.com/DoD_IG)

### **DoD Hotline**

[dodig.mil/hotline](http://dodig.mil/hotline)



DEPARTMENT OF DEFENSE | INSPECTOR GENERAL

4800 Mark Center Drive  
Alexandria, VA 22350-1500  
[www.dodig.mil](http://www.dodig.mil)  
Defense Hotline 1.800.424.9098

